

Application No.: 10/090,965

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AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Currently Amended) A method for the production of a polyhydroxyalkanoate (PHA) comprising:

providing a transgenic yeast cell comprising a first nucleic acid fragment comprising a heterologous nucleotide sequence encoding a PHA polymerase and at least one second nucleic acid fragment comprising a heterologous nucleotide sequence selected from the group consisting of a heterologous nucleotide sequence encoding an acetoacetyl-CoA reductase and a heterologous nucleotide sequence encoding a β -ketothiolase;

culturing the transgenic yeast cell in a culture under anaerobic conditions to cause the production of PHA; and

isolating the PHA from the cell;

wherein an average yield of PHA in the culture is at least about 1.5% of dry cell weight of the culture.

2. (Original) The method of claim 1 wherein the first and second nucleic acid fragments constitute a single nucleic acid fragment.

Application No.: 10/090,965

3. (Original) The method of claim 2 wherein the single nucleic acid fragment comprises a divergent promoter operably linked to two of the heterologous nucleotide sequences.
4. (Original) The method of claim 1 wherein the yeast cell comprises a second nucleic acid fragment comprising a heterologous nucleotide sequence encoding an acetoacetyl-CoA reductase and a third nucleic acid fragment comprising a nucleotide sequence encoding a β -ketothiolase.
5. (Original) The method of claim 4 wherein at least two of the first, second and third nucleic acid fragments constitute a single nucleic acid fragment.
6. (Original) The method of claim 5 wherein the single nucleic acid fragment comprises a divergent promoter operably linked to two of the heterologous nucleotide sequences.
7. (Original) The method of claim 1 wherein at least one nucleic acid fragment is integrated into the genome of the yeast cell.
8. (Original) The method of claim 1 further comprising introducing at least one nucleic acid fragment into the yeast cell to yield the transgenic yeast cell.
9. (Original) The method of claim 1 wherein the yeast cell is a cell from the genus *Saccharomyces*.
10. (Original) The method of claim 1 wherein the yeast cell is an *S. cerevisiae* cell.

Application No.: 10/090,965

11. (Original) The method of claim 1 wherein the yeast cell is a cell from the genus *Kluyveromyces*.
12. (Original) The method of claim 1 wherein the PHA polymerase comprises a PHA_{SCL}.
13. (Original) The method of claim 1 wherein the PHA polymerase comprises a PHA_{MCL} polymerase.
- 14-94 (Cancelled)